

Abstract: Error-correcting codes are used during most of data transmissions these days. To save space, we would like to use codes which are able to correct enough errors without extending the message too much. The expander codes look promising — they are asymptotically optimal, however, in practice they are just too long. Better expander constructions could be achieved via randomness conductors. In this thesis, we explain what conductors are and which constructions are possible for them. In the end we will convert them to expanders and almost get expander codes which are short enough for practical use but nevertheless good.